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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,205	12/07/2001	Philip P. Carvey	2390.1006-009	9706
21005	7590	08/19/2005		
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			EXAMINER KHOO, FOONG LIN	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/021,205	<b>Applicant(s)</b> CARVEY ET AL.	
	<b>Examiner</b> F. Lin Khoo	<b>Art Unit</b> 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/07/01, 7/09/02, 3/04/03, 6/18/03</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: On page 5, lines 20 and 21, "For example, trunks 11-14 are terminated in line cards 51-54" should be changed to "For example, trunks 11-14 are terminated in line cards 41-44" as shown in Fig. 3.

Appropriate correction is required.

### ***Claim Objections***

2. Claims 1 and 5 recite the limitation "selectable weights". There is insufficient antecedent basis for this limitation in the specification. Appropriate correction is required.

Claims 3 and 7 recite the limitation " the output port mapping being adjustable". There is insufficient antecedent basis for this limitation in the specification. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed subject matter ".....selectable weights" is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art on how weights are selected to balance the load.

Claims 3 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed subject matter ".....the output port mapping being adjustable" is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art on how the output port mapping is adjustable.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

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F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 and 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of U.S. Patent No. 6,359,879 in view of Gai et al. (U.S. Patent No. 6,032,194).

With respect to claim 1, the patent claim 11 (dependent on claims 4 and 5) recites all the limitations of the claim in addition to (a) routing table which maps destination addresses to composite trunk and (b) a forwarding table which maps composite trunks to sets of routes within the routing fabric. The scope of claim 1 hence is broader than that of claim 11 (dependent on claims 4 and 5) of the patent, hence it would have been obvious to one skill in the art to omit the routing table which maps destination addresses to composite trunk and forwarding table which maps composite trunks to sets of routes within the routing fabric as it is inherent to claim 1 of the instant applicant. Further, balancing load across the trunk according to selectable weights are not claimed. Gai et al. in the same field of endeavor discloses selectable weights to perform load balancing (Fig. 2, element 236, element 242 and element 242b; Fig. 3C, block 336; col 17, lines 8-31. The path costs for each trunk port can be modified as

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shown in Fig. 3C, block 336. The ability to modify the path cost is associated with weights that can be selectable. The path costs acting as weights determine the port selection for load balancing). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Gai et al. in the system of the patent claim to provide a method and apparatus for balancing message traffic across several links of a computer network (see col 5, lines 28-30).

With respect to claim 4, the patent claim 11 (dependent on claims 4 and 5) claims a routing table which maps destination addresses to composite trunks which corresponds to the output port selector determines the output port within a composite port by table lookup.

Claims 3, 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of U.S. Patent No. 6,359,879 in view of Mori (U.S. Patent No. 5,425,026).

With respect to claim 3, the patent claim 11 (dependent on claims 4 and 5) recites all the limitations of the claim in addition to (a) routing table which maps destination addresses to composite trunk and (b) a forwarding table which maps composite trunks to sets of routes within the routing fabric. The scope of claim 3 hence is broader than that of claim 11 (dependent on claims 4 and 5) of the patent, hence it would have been obvious to one skill in the art to omit the routing table which maps

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destination addresses to composite trunk and a forwarding table which maps composite trunks to sets of routes within the routing fabric as it is inherent to claim 3 of the instant applicant. Further, the output port mapping being adjustable is not claimed. Mori in the same field of endeavor discloses port mapping being adjustable (Fig. 1, elements 5 through 7, col 3, lines 18-49; Fig. 2, col 3, line 50 through col 4, line 22. Routing table 6 is a map that defines correspondences between port addresses and port numbers of remote user terminals as well as local user terminals and the header translation table 7 provides header translation of both signaling and message packets by rewriting their header for routing them through the self-routing network 3 to a desired outgoing trunk port or a desired line port. Rewriting the header is associated with the output port mapping being adjustable). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Mori in the system of the patent claim to provide the ability to route the packet through the self-routing network to a desired outgoing trunk or line port (see col 3, lines 35-40).

With respect to claim 11, the patent claim 11 (dependent on claims 4 and 5) claims the output port selector dynamically balances load across the trunks of a composite trunk which corresponds wherein the output port mapping is dynamically adjustable to balance load across the trunks of a composite trunk.

With respect to claim 12, the patent claim 11 (dependent on claims 4 and 5) claims a routing table which maps destination addresses to composite trunks which

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corresponds to further comprises a table defining plural output port mappings and the output port selector determines the output port within a composite port by table lookup.

Claims 5, 8 and 9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24 of U.S. Patent No. 6,359,879 in view of Gai et al. (U.S. Patent No. 6,032,194).

With respect to claim 5, the patent claim 24 (dependent on claims 19 and 20) recites all the limitations of the claim in addition to (a) the step of selecting one of plural trunks including the step of determining a composite trunk from a destination address through routing table lookup and (b) the step of selecting one of plural trunks further comprises selecting a route within a routing fabric through a forwarding table lookup. The scope of claim 5 hence is broader than that of claim 24 (dependent on claims 19 and 20) of the patent, hence it would have been obvious to one skill in the art to omit the step of selecting one of plural trunks including the step of determining a composite trunk from a destination address through routing table lookup and the step of selecting one of plural trunks further comprises selecting a route within a routing fabric through a forwarding table lookup as it is inherent to claim 5 of the instant applicant. Further, balancing load across the trunk according to selectable weights are not claimed. Gai et al. in the same field of endeavor discloses selectable weights (Fig. 2, element 236, element 242 and element 242b; Fig. 3C, block 336; col 17, lines 8-31. The path costs for each trunk port can be modified as shown in Fig. 3C, block 336. The ability to



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modify the path cost is associated with weights that can be selectable. The path costs acting as weights determine the port selection for load balancing). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Gai et al. in the system of the patent claim to provide a method and apparatus for balancing message traffic across several links of a computer network (see col 5, lines 28-30).

With respect to claim 8, the patent claim 24 (dependent on claims 19 and 20) claims the step of determining a composite trunk from a destination address through routing table lookup which corresponds to wherein the trunk is selected by a table lookup.

With respect to claim 9, the patent claim 24 (dependent on claims 19 and 20) does not claim wherein the destination of the packets is identified from a final destination identifier included in the packet. It is inherent in any packet switched communication network that the header of a packet has a destination address to route the packet from the source to its final destination.

Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24 of U.S. Patent No. 6,359,879 in view of Gai et al. (U.S. Patent No. 6,032,194) and further in view of Mori (U.S. Patent No. 5,425,026).

With respect to claims 10, the patent claim 24 (dependent on claims 19 and 20) does not claim wherein the network is the Internet and the packets are routed under an Internet protocol. Mori discloses wherein the network is the Internet and the packets are routed under an Internet protocol (col 1, lines 21-23 and lines 51-55. The packet switched network is capable of supporting multi-protocol (Fig. 3, element 51) LAN user terminals and the Internet Protocol can be one of the multi-protocol as suggested by Mori). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Mori in the system of the patent claim to support multi-protocol LAN user terminals without placing burden on the user terminals and without generating undesired overhead traffic (col 1, lines 51-55).

Claims 7, 13 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No. 6,359,879 in view of Mori (U.S. Patent No. 5,425,026).

With respect to claim 7, the patent claim 24 (dependent on claims 19 and 20) recites all the limitations of the claim in addition to (a) the step of selecting one of plural trunks including the step of determining a composite trunk from a destination address through routing table lookup and (b) the step of selecting one of plural trunks further comprises selecting a route within a routing fabric through a forwarding table lookup. The scope of claim 7 hence is broader than that of claim 24 (dependent on claims 19

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and 20) of the patent, hence it would have been obvious to one skill in the art to omit the step of selecting one of plural trunks including the step of determining a composite trunk from a destination address through routing table lookup and the step of selecting one of plural trunks further comprises selecting a route within a routing fabric through a forwarding table lookup as it is inherent to claim 5 of the instant applicant. Further, the output trunk mapping being adjustable is not claimed. Mori in the same field of endeavor discloses port mapping being adjustable (Fig. 1, elements 5 through 7, col 3, lines 18-49; Fig. 2, col 3, line 50 through col 4, line 22. Routing table 6 is a map that defines correspondences between port addresses and port numbers of remote user terminals as well as local user terminals and the header translation table 7 provides header translation of both signaling and message packets by rewriting their header for routing them through the self-routing network 3 to a desired outgoing trunk port or a desired line port. These are all associated with the output port mapping being adjustable). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Mori in the system of the patent claim to provide the ability to route the packet through the self-routing network to a desired outgoing trunk or line port (see col 3, lines 35-40).

With respect to claim 13, the patent claim 24 (dependent on claims 19 and 20) claims wherein the trunk is selected to dynamically balance load across the trunks of a composite trunk which corresponds wherein the output trunk mapping is dynamically adjustable to balance load across the trunks of a composite trunk.

With respect to claim 14, the patent claim 24 (dependent on claims 19 and 20) claims the step of determining a composite trunk from a destination address through routing table lookup which corresponds to wherein the trunk is selected by a table lookup.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,324,179 to Doshi et al. relates to an architecture for a telecommunications network comprising Asynchronous Transfer Mode switches interfacing with a SS7 signaling network as well as Synchronous Transfer Mode networks.

U.S. Patent No. 6,434,612 to Hughes et al. relates to the management of network nodes and more particularly to a mechanism for allowing communication and control of a multiservice switch in a network.

U.S. Patent No. 5,878,043 to Casey is directed to an ATM network, in particular, to a LAN (local area network) emulation in the ATM network or networks.

U.S. Patent No. 6,016,310 to Muller et al. relates to a method and apparatus for providing trunking support in a network device.

U.S. Patent No. 5,978,463 to Jurkevics et al. relates to a reservation scheduling system for audio conferencing resources specifically choosing the optimal ones of the

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audio conferencing resources to achieve load balancing and to prevent overflow of an audio conference between conferencing bridges.

U.S. Patent No. 5,838,769 to McNeil et al. relates to the routing of calls in a telecommunications network and more specifically to the various approaches that can be taken to overcome, or at the very least reduce the risk, that calls are blocked from being routed to their destinations, by outages occurring at the egress switches or trunks.

The above prior art are cited to further show the state of the art with respect to packet switching network in routing and forwarding traffic over multiple links or trunks to support high speed transmission entailing high bandwidth connectivity.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Lin Khoo whose telephone number is 571-272-5508. The examiner can normally be reached on flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-272-5508.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Wellington Chin', with a long horizontal line extending to the right.

WELLINGTON CHIN  
SENIOR PATENT EXAMINER